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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,742	01/15/2002	Wenjie Deng	S*EN C-247	3901

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EXAMINER
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DAWSON, GLENN K

ART UNIT	PAPER NUMBER
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3731

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/047,742

Applicant(s)

DENG, WENJIE

Examiner

Glenn K. Dawson

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9-12, 14-24 and 29-34 is/are pending in the application.  
4a) Of the above claim(s) 31, 32 and 34 is/are withdrawn from consideration.  
5) ☒ Claim(s) 10-12 and 14-24 is/are allowed.  
6) ☒ Claim(s) 1-7, 9, 29, 30 and 33 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

Claims 31,32 and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06-05-2006.

***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the valve barrel being seated in the stem bore; the retaining member being in the valve arm to engage the housing must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not provide support for the retaining member being positioned in the valve arm to engage the housing; the valve lever or stem is provided with a bore in which the retaining member is seated, the valve lever provided with a removable locking member to engage the retaining member; the lever having valve holes; a second pin seated in a second bore.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-5871493 in view of Cook-5241990.

Sjostrom discloses a handpiece attached to a cutter, the handpiece houses a motor and includes a rotatable valve 635 mounted in a chamber in the housing. The valve leads to a suction tube having a coupling 650 at an angle as shown in fig. 3A. However, the valve stem bores are not disclosed as being non-circular. Cook discloses that making valve bores teardrop shaped was known at the time of the invention. It would have been obvious to have used tear-drop shaped valve bores, as taught by Cook, as this allows for further regulation of the degree of suction flow (see Cook col. 5 lines 10-52). It also would have been obvious to have the bores be inverted relative to each other, because it would not make any sense to have one opening have its enlarged section aligned with the small section of the opening at the opposite end of the bore. This would prevent proper regulation of the suction pressure. It also would not make any sense to have the large portion of the bores aligned first when proceeding

from closed to fully open because the degree of suction would be greatest at this point. Using the tear-dropped shape to help adjust the suction would necessitate the smaller sections of the bore openings to align first when going from fully closed to fully opened.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al. 5871493 in view of Cook-5241990 as applied to the claims above, and further in view of Deng, et al.-6436067.

Sjostrom as modified by Cook makes obvious the invention as claimed with the exception of the indexing assembly. Deng discloses an indexing assembly on a valve. It would have been obvious to have provided Sjostrom with an indexing assembly, as it provided feedback to the user of the valve attaining a specific position.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng, et al.-6436067 in view of Cook-'990.

Deng discloses a handpiece attached to a cutter. The handpiece houses a motor and has a rotatable valve in a valve chamber of the housing. The valve has a lever 60 attached to a stem having valve bores 58. The valve communicates with a suction tube and fitting 46. However, the bores being non-circular is not disclosed. Cook discloses that making valve bores teardrop shaped was known at the time of the invention. It would have been obvious to have used tear-drop shaped valve bores, as taught by Cook, as this allows for further regulation of the degree of suction flow (see Cook col. 5 lines 10-52). It also would have been obvious to have the bores be inverted relative to each other, because it would not make any sense to have one opening have its enlarged section aligned with the small section of the opening at the opposite end of the

bore. This would prevent proper regulation of the suction pressure. It also would not make any sense to have the large portion of the bores aligned first when proceeding from closed to fully open because the degree of suction would be greatest at this point. Using the tear-dropped shape to help adjust the suction would necessitate the smaller sections of the bore openings to align first when going from fully closed to fully opened.

Claims 29,30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-'493 in view of Wyzenbeek-2525329 and Cox-4113288.

Sjostrom discloses the invention as claimed with the exception of the rotatable coupling on the suction fitting. Wyzenbeek discloses a rotatable coupling on a suction fitting for a suction tube. It would have been obvious to have provided a rotatable suction fitting coupling on Sjostrom's device, as this allows for the handpiece to rotate relative to the suction tube thus counteracting torsional forces applied while moving an operating the handpiece.

Sjostrom as modified by Wyzenbeek makes obvious the invention as claimed with the exception of the removable locking ring in aligned grooves on the mount and the fitting. Cox discloses a rotatable coupling on a flow tube having a locking member 46 which sits into grooves 50 and 48 on the two members of the rotatable coupling and which removably locks them together. It would have been obvious to have used the connection of Cox for the suction fitting of Sjostrom as it provides a conduit with a constant flow diameter while providing a rotatable coupling allowing rotation of one tube to not be translated to the other tube.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 of U.S. Patent No. 6312441 in view of Cook-'990.

Claim 7 of the patent claims the invention as claimed with the exception that the application claims are broader in some respects but narrower in others. The claims of the patent fail to disclose the non-circular valve bore openings. Cook discloses such openings. It would have been obvious to have proved the device of claim 7 with the non-round valve bore openings of Cook, as this allows for more suction control as noted above. To have the openings be in the claimed relative orientation is obvious for the same reasons noted above. Claim 9 of the patent claims the removable locking member of claim 7 of the application.



Claims 5 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 10 of U.S. Patent No. 6312441 in view of Cook-'990 and Deng, et al.-'067.

The difference between claims 5 and 6 of the application are that they include an indexing assembly. Deng discloses an indexing assembly. It would have been obvious to have used an indexing assembly on the device of claims 7 or 10 in order to provide the user with a tactile indication of the valves position.

### ***Drawings***

The proposed drawing correction of 10-31-2005 is approved. However, the drawings as a whole still are objected to for the reasons noted above.

### ***Allowable Subject Matter***

Claims 10-12 and 14-24 are allowed.

### ***Response to Arguments***

Applicant's arguments filed 10-31-2005 have been fully considered but they are not persuasive.

The retaining member being in the valve arm is still not shown. The fact that the valve structures are different is not persuasive to prevent their teachings from being combined. The orientation of the non-circular valve bore openings have been determined to have been obvious for the reasons noted above. The argument as to non-analogous art for the Cox reference is not persuasive. One skilled in the art would have looked to any type of tubular coupling used for any purpose for the transmission of any fluid, including air or suction, for providing teachings of relevancy with respect to

means for rotatably removably coupling one tubular conduit to another. Which one of the components has the inner or outer groove is considered a mere rearrangement or reversal of known parts.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K. Dawson whose telephone number is 571-272-4694. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Glenn K Dawson  
Primary Examiner  
Art Unit 3731

Gkd  
09 August 2006